taking a stand.

ethically-driven actions and activism initiated by technology's creators and users.

introduction.

As technology advances at an unprecedented pace so does the societal impact. Big tech companies now have tremendous power and an outsized impact on the lives of ordinary citizens. Users and their data have become the currency of the digital world, fueling concerns around data collection, privacy, surveillance and security. Automated systems and applications of artificial intelligence (AI) are now utilized and relied on by nearly every industry including the justice system, the military, the insurance industry and real estate. Advances in big data and machine learning have made AI systems widely adaptable and accessible. At the same time, concerning issues of machine bias have emerged. Values once cherished in the early years of the digital age--fairness, openness, equal opportunity--have been corrupted by unforeseeable consequences, and society is now grappling with new ethical dilemmas.

<u>Ethical Automation</u>, a three-month academic seminar lead by Johan Michalove explored the current state of automated and intelligent systems as well as ethics and the future of technology. Course readings and discussions examined the effects of automation and the ethical decisions faced by technologists--prompting classroom discussions about what kind of world we want to live in, who is responsible for the ethical future of technology and who has the power to make a difference.

who is responsible?

Should individual tech companies and executives be held responsible for the development and distribution of ethical technology? Do engineers, the people with the most knowledge about how the technology works, share this responsibility? Is it up to lawmakers and government enforcers to regulate technology? Do consumers have the power and ability to bring about change?

the goal of this project is

- 1. to encourage everyone--engineers, executives, researchers, companies, consumers, politicians, lawmakers, journalists--to consider the ethical consequences of technology
- 2. to cite the tools available to those who intend to implement ethically-driven technology
- to recognize the people who are working to create technology that empowers individuals and has positive societal impact.

a selection of events.

more to come...

[2010]

Google retracts search engine in China. (March 2010)

A combination of Chinese government censorship and attacks by Chinese hackers propelled Google to revoke its search engine from the country. Read more from <u>The New York Times</u>.

[2013]

Guillaume Chaslot fired from Google (2013)

Guillaume Chaslot, a senior engineer at Google, worked on the YouTube recommender algorithm optimized to increase time people spent on the site. This raised ethical questions for him after he pushed for changes around the tactics used to engage users. Chaslot was fired from Google in 2013. Read more about the YouTube recommender on <u>The New York Times</u>, the <u>Guardian</u> and <u>a post by Chaslot on Medium</u>.

Snowden leaks classified information from the NSA. (May 2013)

Edward Snowden, a programmer who worked in computer network security and was an employee of the NSA contractor Booz Hamilton. After seeing how the NSA was spying on people, he leaked classified information to journalists in order inform the public about the reality of domestic surveillance. See the <u>NSA Files</u> at theguardian.com.

[2016]

Never Again Pledge (December 2013)

An action-oriented pledge signed by over 2,500 tech workers who refuse to build the engine of deportation, a response to statements made by Trump's campaign. It is "a clear demonstration that a wide cross-section of tech workers are opposed to the U.S. government using databases to target people by race, religion, or national origin." (neveragain.tech/action) Find out more: <u>neveragain.tech</u>, <u>Wikipedia</u>.

[2017]

Pentagon's Algorithmic Warfare Cross-Functional Team & Google partnership. (April 2017)

Algorithmic Warfare Cross-Functional Team, also known as Project Maven, was launched in April 2017 by the Department of Defense to develop advanced AI systems for the military. Google landed the contract and in 2018 project's funding doubled to \$131 million. Read the <u>Pentagon memo</u> and reporting by <u>The Washington Post</u> and <u>The New York Times</u>.

[2018]

Chaslot creates algotransparency.org (January 2018)

Guillaume Chaslot, a Google engineer that helped develop the YouTube recommender creates algotransparency.org. The goal of algotransparency.org is "to see which information the YouTube algorithm is showing to people. The algorithm is responsible for more than 700,000,000 hours of watch time every day, and it is not fully understood, even by the people who build it." (algotransparency.org) See more here: www.algotransparency.org

Acton quits Facebook, walking away from \$850 million. (February 2018)

Brian Acton, the co-founder of WhatsApp, quit his job at Facebook walking away from an estimated \$850 million. His decision was fueled by Zuckerberg and Sandberg's interest in monetizing WhatsApp by adding targeted ads and commercial messaging, against his wishes. More from Forbes <u>here</u>.

Brian Acton invests in the Signal Foundation. (February 2018)

Brian Acton invests \$50 billion in the establishment of Signal Foundation, a non-profit organization set up to support the free messaging service with end-to-end encryption, Signal, which is much like the original WhatsApp he invented and sold to Facebook. Read more from Forbes <u>here</u>.

Cambridge Analytica scandal exposed. (March 2018)

In 2014 Cambridge Analytica illegitimately acquired private data of 50 million Facebook users in order to develop psychological voter profiles intended to influence American elections and the Brexit vote. Investigations are underway. Read more from <u>The New</u> <u>York Times</u>.

#deleteFacebook movement. (March 2018)

The Cambridge Analytica Scandal prompted the #deleteFacebook movement. In an attempt to vote with their clicks, Facebook users permanently deleted their accounts, including former Facebook exec and WhatsApp co-founder Brian Acton who tweeted, "It is time. #deletefacebook." Read more from the <u>The New York Times</u>.

Google requires voice assistant to identify as a bot. (May 2018)

Google creates a humanistic voice assistant and requires it to identify as a bot when interacting with people who may otherwise assume it is a human. Read more on Wired.com.

Facebook tackles algorithmic bias with Fairness Flow. (May 2018)

At the 2018 F8 conference, Facebook tested artificial intelligence technology that can supposedly detect machine bias. Read more on <u>Quartz</u>.

Google declines to renew Project Maven contract due to employee backlash. (June 2018)

Google cancels its contract to develop AI for US military after more than 4,000 Google employees <u>spoke up</u> against the development of warfare technology. Dozens of engineers quit their jobs in protest. Read the <u>letter</u> and reporting by <u>The New York Times</u> and <u>Wired</u> magazine.

Tech workers petition against warfare technology and military contracts. (June 2018)

The Department of Defense opens bidding on JEDI contract prompting further resistance from tech workers across the industry. Tech workers petition for big tech companies like Microsoft, Amazon, Google and IBM to turn down warfare contracts. Read reporting by <u>gizmodo.com</u> and the petition at <u>coworker.org</u>.

A health label for data sets. (June 2018)

The Data Nutrition Project intends to help practitioners of AI develop unbiased and inclusive algorithms by providing an assessment of data collections so it's easier to understand the viability, fitness and potential bias of a data set. The project was developed at Assembly, a program that works on emerging issues of AI. Assembly is hosted by the Berkman Klein Center and MIT Media Lab. Learn more about the project.

Employee resistance to Project Dragonfly. (August 2018)

Google employees, upset over the company's decision to create a censored search engine for China, demand more transparency on the project in a letter stating "we do not have the information required to make ethically-informed decisions about our work, our projects, and our employment." (The New York Times) Read more from <u>The New York Times</u>.

Stamos leaves Facebook after advocating for more disclosure on Russian interference. (August 2018)

Facebook CSO (chief security officer) Alex Stamos, Facebook's chief security officer departed Facebook in August after alleged disagreements on security issues and disclosures pertaining to Russian interference on Facebook. Read more from The New York Times <u>here</u> and <u>here</u>.

Global Google employee walkouts. (November 2018)

Over 20,000 Google employees and contractors walked out of offices around the world protesting sexual misconduct, lack of transparency, and a non-inclusive company culture. Read reporting by <u>Fortune</u>.

Contributor Covenant adopted by big tech companies. (2018)

The Contributor Covenant, established in 2014, is a code of conduct for open source projects that supports diversity. It was adopted by big tech companies Apple, Google, Intel and Microsoft for all of their open source projects. Listen or read reporting by the Mozilla's IRL Podcast.

[2019]

OpenAl deems language model too dangerous. (February 2019)

Artificial intelligence research organization, OpenAI has created an a "large-scale unsupervised language model which generates coherent paragraphs of text" (OpenAI.com) and due to concerns of malicious use the organization had decided not to release the model. Read more about the project on <u>OpenAI.</u>

Google ends forced arbitration. (February 2019)

Google ends forced arbitration, listening to the demands of their employees who spoke out against non-inclusive company culture and the handling of sexual misconduct. Read reporting by <u>Forbes</u> magazine.

Facebook announces new privacy-focused vision for social media. (March 2019) Mark Zuckerberg posts an essay on the privacy-focused future of Facebook. It was met with skepticism and many questions. Read more on Facebook.

NSA stops phone spying program. (March 2019)

The NSA stops the phone spying program six years after whistleblower Edward Snowden leaks classified information exposing it. Read more reporting by <u>The New</u> <u>York Times</u>.

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